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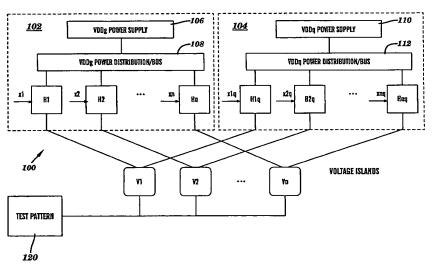
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(54) Title: HOT SWITCHABLE VOLTAGE BUS FOR IDDQ CURRENT MEASUREMENTS



(57) Abstract: A voltage island system including a hot-switchable voltage bus for IDDQ current measurements. The voltage island system includes a plurality of voltage islands (V1, V2, ..., Vn), a global power system (102), and a quiescent power system (104). The global power system (102) includes a plurality of on-chip global header devices (H1, H2, ..., Hn) for selectively providing a voltage VDDg to the plurality of voltage islands in response to global header control signals (x1, x2, ..., xn), respectively. A global VDDg power supply (106) provides power to the global header devices (H1, H2, ..., Hn) via a VDDg power distribution grid/bus (108). The quiescent power system (104) includes a plurality of on-chip quiescent header devices (Hlq, H2q, ..., Hnq) for selectively providing a quiescent voltage VDDq to the plurality of voltage islands in response to quiescent header control signals xlq, x2q, ..., xng, respectively. A quiescent VDDq power supply (110) provides power to the quiescent header devices via a VDDq power distribution grid/bus (112).